

A bird in the hand is not always easily identified: Description of downy chicks of Chestnut-backed Button-quail (*Turnix castanotus*) from Cobourg Peninsula, Northern Territory, Australia

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Abstract

A clutch of four downy button-quail chicks was captured in a pitfall trap on Cobourg Peninsula, without an adult bird to aid identification. We believe they were Chestnut-breasted Button-quail and provide a description and reasons for this identification.

During a pitfall-trapping survey for small mammals in eucalypt forests and woodlands of Garig Gunak Barlu National Park (Cobourg Peninsula) in June 2010, four button-quail chicks were trapped in one pitfall. Pits were 60 cm deep, 28 cm diameter at the surface and were set in two lines of ten pits, 10 m between pits and with a 30 cm high, 100 m long drift fence connecting the pits along each line (Ward 2009). The pitfall was empty when checked in the late afternoon (c. 17.30 hr) and the chicks were found in the traps when cleared the following morning (c. 07.30 hr). The presence of only three toes on each foot confirmed that these chicks were button-quails (family Turnicidae). No adult button-quails were seen at the site over the four nights of trapping there, but three species occur in the wetter parts of the Top End – Red-backed Button-quail (*Turnix maculosus*), Red-chested Button-quail (*T. pyrrhoborax*), and Chestnut-backed Button-quail (*T. castanotus*). This note sets out why we believe these chicks belonged to the latter species, and provides the first known detailed description of downy chicks of this species.

The chicks had only downy feathers, had open eyes and two of the four retained an egg tooth (Figure 1). The dorsal body surface was orange-red with a prominent pale-edged rufous-brown mid-dorsal stripe from nape to rump. The upper left and right sides of the neck and mantle were unfeathered but the mid-mantle and back were covered in down. The ventral body surface was a light grey-cream colour. The background colour of the head was intermediate between the orange-red and rufous tones of the body, and the head bore three prominent white stripes:

one central stripe started from the lores either side of the bill, met at the forecrown and extended over the crown to the nape; two stripes, one on either side of the head, started from the lores, passed over the eyes and extended back to the neck (Figure 2); and two less prominent white lines started at the gape on each side and passed back under the ear openings. Creamy-white downy feathers covered the lores, and under the chin was white. The eye was solid dark. The skin was black and the beak was black above (egg tooth white if present) and dark with a maroon tinge below. The feet were pale yellow. Measured lengths were: head plus bill 20.5 mm, bill 6.0 mm, tarsus 14.6 mm and middle toe (without claw) 11.3 mm.

To identify the species, comparisons were made with the text descriptions in Marchant & Higgins (1993) of chicks of the three button-quail species recorded from the Top End. The description of the downy chicks of Chestnut-backed Button-quail is the least defined of the three and is quoted below in its entirety. For the other two potential species, what follows are abridged versions of the descriptions with characters that do not match marked in *italics*, and characters that we observed marked in parentheses with **bold type** highlighting characters contrary to the description:

Chestnut-backed Button-quail:

“... brown-rufous above, with central and lateral pairs of cream stripes; paler cream below”. Source of this description is unknown and there is no other information available” (Marchant & Higgins 1993: 443, citing Schodde & Tidemann 1986).

Red-chested Button-quail:

Downy young. Head and neck: hindneck and top of head *brown (orange-red to rufous)*, *scattered cream tips causing greyish tinge (not evident)*. Top of head boldly patterned by white median stripe running from *centre of crown (forecrown)* to hindneck, and by broad white supercilium, about width of eye, that runs from the lores to *curl downwards behind the ear (continues to the nape, does not curl downwards)*. Borders of median crown stripe *and upper margins of supercilium*, broadly bordered with black-brown (some darker edging to crown stripe) (**supercilium white**). Upperparts: *mantle unfeathered*, usually concealed by down of wing pads and hindneck (upper left and right sides of mantle without down, **mid-mantle and rest of back covered by down**).

Red-backed Button-quail:

Head and Neck: *dark grey-brown (orange-red to rufous)* with black-brown stripe from centre of forecrown to base of bill. On nape, sides of crown and behind ear, *strands of down have off-white to buff tips (prominent white stripes present on head)*.



Figure 1. One of four button-quail chicks caught in a pitfall trap on Cobourg Peninsula, June 2010 (MAGNT T.5756). (Stuart Young)



Figure 2. Dorsal view of one of four button-quail chicks caught in a pitfall trap on Cobourg Peninsula, June 2010 (MAGNT T.5756). Note the white egg tooth at the tip of the upper bill and the prominent white stripes on the head. (Simon Ward)

Marchant & Higgins (1993) include pictures of chicks in their colour plates of Red-chested and Red-backed Button-quail and Simpson & Day (1996) provide black and white sketches of hatchlings of these species. Neither reference depicts the hatchlings or chicks of Chestnut-backed Button-quail. The pale striping on the head and body appears most striking in the pictures of the Red-chested Button-quail, whilst the Red-backed Button-quail is depicted as being relatively unmarked. The strong pattern of striping on the heads of the chicks caught at Cobourg Peninsula lead us to conclude that they were not chicks of the Red-backed Button-quail. The description of the chicks of Red-chested Button-quail summarised above is the most detailed, and several features of the Cobourg chicks do not match that description. The species occurs on Cobourg Peninsula, but there have been only two recorded sightings there – in 2004 and 2007 (*NT Fauna Atlas*, Department of Land Resource Management, unpubl.). Consequently, we do not believe the Cobourg chicks were Red-chested Button-quail. This leads us to the conclusion that the chicks we caught were Chestnut-backed Button-quail.

The Chestnut-backed Button-quail has a disjunct distribution in the Top End and the Kimberley region. Its preferred habitat is grassy eucalypt woodlands, often on sandy or rocky ridges. It can be locally common but is an infrequently recorded species and is listed as Data Deficient in the Northern Territory (DLRM 2012). There are 124 records of the species since 1970 in the *NT Fauna Atlas* and six of these are from Cobourg Peninsula. There are previous records of Chestnut-backed Button-quail within approximately 2 km of the location where we caught our chicks (A. Stewart, pers. comm.).

Chestnut-backed Button-quail have been recorded breeding from December to May (Schodde & Tidemann 1986), these months constituting the wet season and early dry of northern Australia. Schodde & Tidemann (1986) describe a typical clutch size of four and give a description of the nest and eggs. Our observations of four recently-hatched chicks in late June indicate that breeding may extend later into the dry season than previously described.

This is but a brief note describing the chicks of what we believe was the Chestnut-backed Button-quail. However, much more detail of the species' breeding ecology remains to be observed and discovered.

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